
APPROVAL
PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended.

APPROVAL NO.: 638-03-00

APPLICATION NO.: 020-638

EFFECTIVE DATE: June 1, 2011

EXPIRY DATE: May 31, 2021

APPROVAL HOLDER: EPCOR WATER SERVICES INC.

ACTIVITY: Construction, operation and reclamation of a waterworks system

..... for the Edmonton Waterworks System

..... is subject to the attached terms and conditions.

Designated Director under the Act 

Date Signed June 1, 2011

TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 1: DEFINITIONS

SECTION 1.1: DEFINITIONS

- 1.1.1 All definitions from the Act and the regulations apply except where expressly defined in this approval.
- 1.1.2 In all PARTS of this approval:
- (a) "Act" means the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c.E-12, as amended;
 - (b) "approved laboratory" means laboratory accredited to the requirements of ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*, for the drinking water tests methods specified by the Director;
 - (c) "as-built engineering drawings" means the drawings used in construction that have been updated to record what was actually built;
 - (d) "bacteriological analysis" means the analysis of water for the presence of *E. coli* or total coliforms;
 - (e) "chemical" means any substance that is added or used as part of the treatment process;
 - (f) "chlorine residual" means free chlorine, or combined chlorine or total chlorine;
 - (g) "clearwell" means a reservoir for the storage of filtered water of sufficient capacity to prevent the need to vary the filtration rate with variations in demand. May also be used to provide chlorine contact time for disinfection;
 - (h) "continuous monitoring" means flow measurement or sample analysis through in-line equipment that creates flow measurements or frequent, discrete sample analysis output and includes a data recorder;
 - (i) "day" means calendar day;
 - (j) "Director" means an employee of the Government of Alberta designated as a Director under the Act;
 - (k) "disinfectant residual" means total concentration of disinfectant in water;
 - (l) "disinfection" means a chemical or physical process of treating water to inactivate microorganisms;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

- (m) "*E. coli*" means *Escherichia coli* bacteria;
- (n) "electronic reporting" means submitting monitoring results to the Director as required in this approval, electronically through the secure internet website provided by Alberta Environment at <http://www.environment.alberta.ca/1506.html>;
- (o) "GCDWQ" means the *Guidelines for Canadian Drinking Water Quality*, published by Health Canada, as amended;
- (p) "grab", when referring to a sample, means an individual sample collected in less than 30 minutes and which is representative of the substance sampled;
- (q) "ISO/IEC" means the International Organization for Standardization / the International Electrotechnical Commission;
- (r) "Log reduction" means the base 10 logarithm of the ratio of raw water concentrations divided by the treated water concentration of total *Giardia* cysts, *Cryptosporidium* oocysts or viruses;
- (s) "MAC" means the Maximum Acceptable Concentration, specified in the GCDWQ for a particular parameter;
- (t) "PWR" means the *Potable Water Regulation*, as amended;
- (u) "produced water" means all water that has gone through treatment and has entered the distribution system;
- (v) "raw water" means untreated source water from water wells, surface water intakes or infiltration galleries that constitute the water supply;
- (w) "regulations" means the regulations enacted pursuant to the Act and as amended;
- (x) "Standards and Guidelines Document" means the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Alberta Environment, as amended;
- (y) "User Agreement" means the *Drinking Water Quality User Agreement* signed by the approval holder and the Director.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 2: GENERAL PROVISIONS

SECTION 2.1: GENERAL

- 2.1.1 The approval holder shall comply with all conditions in this approval.
- 2.1.2 Any conflict between the approval application and the terms and conditions of this approval shall be resolved in favour of this approval.
- 2.1.3 The terms and conditions of this approval do not affect any rights or obligations created under any other authorization issued by the Department.
- 2.1.4 The approval holder shall carry out all electronic reporting, or cause all electronic reporting to be carried out in accordance with the User Agreement.
- 2.1.5 The approval holder shall comply with the terms and conditions of the User Agreement.
- 2.1.6 The terms and conditions of this approval are severable. If any term or condition of this approval or the application of any term or condition is held invalid, the application of such term or condition to other circumstances and the remainder of this approval shall not be affected thereby.
- 2.1.7 If the approval holder monitors for any substances or parameters, which are the subject of limits in this approval more frequently than is required, using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the next reports required by this approval.
- 2.1.8 *Environmental Protection and Enhancement Act* Approval No. 638-02-00 is cancelled.

PART 3: PLANNING, CONSTRUCTION AND / OR UPGRADING REQUIREMENTS

Planning, construction and upgrading requirements for the waterworks system and a risk assessment plan will be described in the *Operations Program*.

PART 4: OPERATIONAL REQUIREMENTS

SECTION 4.1: WATERWORKS SYSTEM

- 4.1.1 The approval holder shall operate and maintain a waterworks system consisting of
 - (a) source water from the North Saskatchewan River;
 - (b) two water treatment plants;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

- (c) water storage; and
 - (d) a distribution system.
- 4.1.2 The approval holder shall develop, maintain and implement an Operations Program the major components of which are listed in SCHEDULE 1 of this approval.
- 4.1.3 The approval holder shall submit a copy of the up-to-date Operations Program to the Director on or before January 1, 2013 and shall receive a letter of acknowledgement.
- 4.1.4 The approval holder shall:
- (a) review the Operations Program annually at a minimum;
 - (b) update the Operations Program as required; and
 - (c) submit a summary of the changes to the Operations Program to the Director each year.
- 4.1.5 The approval holder shall make any changes to SCHEDULE 1 of this approval when requested or approved in writing by the Director.

SECTION 4.2: FACILITY CLASSIFICATION AND CERTIFIED OPERATOR REQUIREMENTS

FACILITY CLASSIFICATION AND CERTIFIED OPERATION

- 4.2.1 The water distribution system and each water treatment plant in this approval are classified as Class IV in accordance with the *Water and Wastewater Operators' Certification Guidelines*.
- 4.2.2 At all times the water treatment plants and the water distribution system shall be operated by certified operators in accordance with the Standards and Guidelines Document as amended.

SECTION 4.3: PERFORMANCE LIMITS

POTABLE WATER QUALITY STANDARDS

- 4.3.1 All produced water shall meet the Performance Outcomes and Treated Water Limits specified in SCHEDULE 3.
- 4.3.2 In addition to compliance with the limits specified in SCHEDULE 3, the produced water shall comply with the *Potable Water Quality* requirements of the *Potable Water Regulation*, as amended, for those parameters specified in SCHEDULE 4, and any parameters added to the GCDWQ.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

SECTION 4.4: CHEMICALS USED

- 4.4.1 The approval holder shall only add substances, materials or compounds to water being treated to be potable as specified in the *Operations Program* and according to the requirements of the Standards and Guidelines Document as amended, or as otherwise authorized in writing by the Director.

SECTION 4.5: WASTE STREAMS

- 4.5.1 Waste streams shall be released to the North Saskatchewan River and only as described in *Operations Program*.
- 4.5.2 Monitoring of waste streams released to the North Saskatchewan River shall be conducted as per the *Operations Program*.

PART 5: MONITORING REQUIREMENTS

SECTION 5.1: MONITORING

- 5.1.1 The approval holder shall monitor the waterworks system in accordance with SCHEDULE 3.

SECTION 5.2: DATA QUALITY ASSURANCE

- 5.2.1 Any monitoring required pursuant to this approval shall be conducted in accordance with the *Operations Program* and will be consistent with the Standards and Guidelines Document as amended.

PART 6: REPORTING REQUIREMENTS

SECTION 6.1: CONTRAVENTION REPORTING

- 6.1.1 In addition to any other reporting required pursuant to this approval, the Act, or the regulations, the approval holder shall immediately report to the Director any contravention of this approval or any structural or equipment malfunction in the waterworks system that may affect the quality or supply of potable water as described in the *Operations Program* and according to the Standards and Guidelines Document as amended.
- 6.1.2 In addition to the immediate reporting in 6.1.1, the approval holder shall provide a report to the Director as described in the *Operations Program* and according to the Standards and Guidelines Document as amended.
- 6.1.3 Where a bacteriological quality sample shows the presence of:
- (a) total coliform; or

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(b) *E. Coli*

in addition to any reporting or other requirements pursuant to the Act, or the Regulations, the approval holder shall carry out the corrective actions set out in the *Communication and Action Protocol for Failed Bacteriological Results Including Other Potential Failures in Drinking Water for Waterworks Systems Authorized under the Environmental Protection and Enhancement Act*, August 2009, entered into by Alberta Environment, Alberta Health Services, Alberta Health and Wellness and Health Canada, as amended.

- 6.1.4 Where a sample does not meet the Maximum Acceptable Concentration as specified in the GCDWQ for one or more of the physical, inorganic, organic chemical or pesticide parameters in SCHEDULE 4, in addition to any reporting or other requirements pursuant to the Act, or the Regulations, the approval holder shall carry out the corrective actions set out in the *Action Protocol for Exceedances of Chemical Health Parameters in Drinking Water*, Alberta Environment, September 2009, as amended.
- 6.1.5 Where continuous monitoring required to meet Schedule 3 fails, the approval holder shall following the procedure as described in the *Operations Program*.

SECTION 6.2: REPORTING REQUIREMENTS

- 6.2.1 The approval holder shall compile and retain monthly, annual and reports at the water treatment plant as per the *Operations Program*.
- 6.2.2 The approval holder shall submit electronic reports as per the *Operations Program*.

PART 7: RECORD KEEPING REQUIREMENTS

SECTION 7.1: GENERAL

- 7.1.1 The approval holder shall record information records pertaining to the waterworks as described in the *Operations Program* and according to the Standards and Guidelines Document as amended.

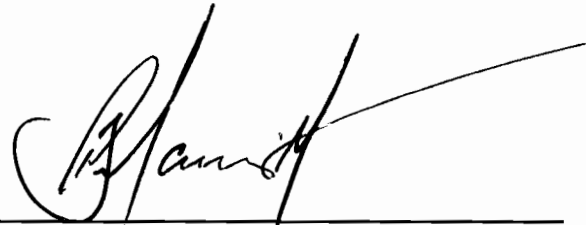
TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 8: RECLAMATION REQUIREMENTS

SECTION 8.1: GENERAL

- 8.1.1 Where the land surface has been disturbed during construction, expansion, modification or repair of any portion of a waterworks system, reclamation of the land surface to equivalent land capability shall be performed following the construction, expansion, modification or repair, in accordance with the Standards and Guidelines Document.

DATED June 1, 2011



DESIGNATED DIRECTOR UNDER THE ACT

SCHEDULE 1

OPERATIONS PROGRAM Monitoring, Measuring and Reporting Frequency Requirements

Major Categories for Environmental Aspects

Source Water Protection:

- 1 Source Water Protection Plan

Intake and Water Treatment:

- 2 Water Treatment Procedures

- a) Treatment Process Overviews
 - Raw Water Intake
 - Clarification (Alum, Primary Polymer, Carbon)
 - Disinfection (Chlorine, Sodium Hypochlorite, Ammonia)
 - Filtration (Filter Polymer)
 - UV Disinfection
 - pH Adjustment (Caustic Soda)
 - Fluoridation
- b) Analyzer Shutdown Philosophy
- c) Treated Water Storage and Pumping Overview
- d) Special Procedures
 - Spring Runoff Strategy
 - Summer Rainfall Strategy
 - High Raw Water Color Strategy

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SCHEDULE 1

**OPERATIONS PROGRAM
Monitoring, Measuring and Reporting Frequency Requirements**

- 3 Log Inactivation Calculation
- 4 Plants Chemical Management
- 5 Plants Chemical Waste Management

Water Storage, Transportation and Distribution:

- 6 Distribution system operation and maintenance program:
 - Main break repairs
 - Valve repairs/replacements (below surface)
 - Hydrant repairs/replacements (below surface)
 - Service repairs (below surface)
 - System unidirectional flushing program
 - Hydrant flushing and purging program
 - Hydrant painting, checking and flagging and surface repairs
 - Distribution valve surface repairs
 - Distribution service surface repairs
 - Transmission valve repairs
 - Transmission valve decommissioning and recommissioning
 - Flushing to maintain water quality

- 7 Cross Connection Control Plan

- 8 Lead Response Plan

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SCHEDULE 1

OPERATIONS PROGRAM Monitoring, Measuring and Reporting Frequency Requirements

9 Home Sniffing Program

Water Quality Assurance

10 Laboratory Data Quality Management System

11 Water Quality Assurance Plan for On-Line Analyzers

- Free and total chlorine
- Turbidity
- Particle counts
- pH
- Fluoride
- Temperature

12 Water Quality Monitoring Plan

- Raw Water Monitoring
- Water Treatment Plant Monitoring
- Field Reservoir Monitoring
- Distribution System Monitoring
- Waste Stream Monitoring

Management of Residuals:

13 Residuals Management Plan

SCHEDULE 1

**OPERATIONS PROGRAM
Monitoring, Measuring and Reporting Frequency Requirements**

Management System Components

- 14 Risk Assessment (Source to Tap)
- 15 Edmonton Water Capital Program
- 16 Emergency Response Plans
- 17 Incident Management
- 18 Reporting
- 19 Documents Management

SCHEDULE 2 – RAW WATER

Monitoring, Measuring and Reporting Frequency Requirements

PARAMETER	STATION LOCATION	MONITORING TYPE and FREQUENCY	REPORTING FREQUENCY
Turbidity	RAW WATER ENTERING THE WATER TREATMENT PLANT	Grab sample, Once per day	Reported monthly As per Part 6 of the approval, unless notified in writing by the Director as per 6.4
Volume		Metered, Once per day Reported as Total in m ³	Reported monthly As per Part 6 of the approval, unless notified in writing by the Director as per 6.4
Fluoride	RAW WATER ENTERING THE WATER TREATMENT PLANT	Grab sample, Once per week	Reported monthly As per Part 6 of the approval, unless notified in writing by the Director as per 6.4

SCHEDULE 3 – TREATED WATER QUALITY
Limits, Monitoring and Reporting Frequency

PARAMETER	STATION LOCATION	MONITORING/MEASUREMENT TYPE, NUMBER AND FREQUENCY	REPORTING CONTENT	REPORTING FREQUENCY	LIMITS
Treated Water BACTERIOLOGICAL					
Bacteriological quality <i>E. coli</i> Total Coliforms	DISTRIBUTION: BACTERIOLOGICAL, RANDOM LOCATIONS	Grab samples in the quantity specified in the GCDWQ, and the samples shall be taken at regular intervals throughout the month as per the <i>Operations Program</i> .	Number of Grab samples taken per month and Presence or Absence of indicator organisms	As per the <i>Operations Program</i>	Zero <i>E. coli</i> organisms per 100 mL Zero Total coliform organisms per 100 mL
RAPID SAND FILTER - Treated Water TURBIDITY					
Turbidity	ALL INDIVIDUAL FILTERS (1 to 9 at Rosedale WTP, 1 to 18 at E. L. Smith WTP) (after individual filter train at a point upstream of the reservoir)	Continuous monitoring and recording at ≤ 5 minute sampling intervals	Report MAXIMUM DAILY value	As per the <i>Operations Program</i>	≤ 0.3 NTU 100 percent of the time

SCHEDULE 3 – TREATED WATER QUALITY
Limits, Monitoring and Reporting Frequency

PARAMETER	STATION LOCATION	MONITORING/MEASUREMENT TYPE, NUMBER AND FREQUENCY	REPORTING CONTENT	REPORTING FREQUENCY	LIMITS
<i>Treated Water PRIMARY DISINFECTION</i>					
Total Chlorine Residual	ENTERING DISTRIBUTION SYSTEM	Continuous, with ≤ 5 minute sampling intervals	Record MINIMUM value mg/L Reported Once per day	As per the Operations Program	≥ 1.0 mg/L as Total Chlorine
<i>Treated Water PRIMARY DISINFECTION – ALL WATERWORKS SYSTEMS</i>					
<i>Cryptosporidium</i> Log Reduction	ENTERING DISTRIBUTION SYSTEM	Continuous	Report Daily MINIMUM value	As per the Operations Program	≥ 5.5
<i>Giardia</i> Log Reduction	ENTERING DISTRIBUTION SYSTEM	Continuous	Report Daily MINIMUM value	As per the Operations Program	≥ 5.5
Virus Log Reduction	ENTERING DISTRIBUTION SYSTEM	Continuous	Report Daily MINIMUM value	As per the Operations Program	≥ 4

SCHEDULE 3 – TREATED WATER QUALITY
Limits, Monitoring and Reporting Frequency

PARAMETER	STATION LOCATION	MONITORING/MEASUREMENT TYPE, NUMBER AND FREQUENCY	REPORTING CONTENT	REPORTING FREQUENCY	LIMITS
<i>Treated Water SECONDARY DISINFECTION – ALL WATERWORKS SYSTEMS</i>					
Combined Chlorine Residual	DISTRIBUTION: RANDOM LOCATIONS	Continuous or Grab samples, Daily	Daily value	As per the Operations Program	≥ 0.5 mg/L, based on 75% of the samples taken on a particular day
<i>Treated Water FLUORIDATION – ALL WATERWORKS SYSTEMS (Only when Fluoride is added)</i>					
Fluoride	ENTERING DISTRIBUTION SYSTEM	Continuous, with ≤ 5 minute sampling intervals	Record Daily MIN, MAX, AVERAGE values	As per the Operations Program	0.5 to 0.9 mg/L
Fluoride	ENTERING DISTRIBUTION SYSTEM	Calculated average of the daily readings	Monthly value	As per the Operations Program	0.6 to 0.8 mg/L

SCHEDULE 3 – TREATED WATER QUALITY

Limits, Monitoring and Reporting Frequency

PARAMETER	STATION LOCATION	MONITORING/MEASUREMENT TYPE, NUMBER AND FREQUENCY	REPORTING CONTENT	REPORTING FREQUENCY	LIMITS
<i>Treated Water – ALL WATERWORKS SYSTEMS</i>					
Total Trihalomethanes (TTHMs) and Haloacetic Acids - Total (HAA5)	Locations and frequency as described in the <i>Operations Program</i> (minimum 4 Grab samples per month as per the Standards and Guidelines Document, samples are to be taken within a 24 hour period)		Analytical Results	As per the <i>Operations Program</i>	As per the PWR
N-Nitrosodimethylamine (NDMA)	Locations and frequency as described in the <i>Operations Program</i> (minimum 4 Grab samples every 3 months, samples are to be taken within a 24 hour period)		Analytical Results	As per the <i>Operations Program</i>	As per the PWR

SCHEDULE 3 – TREATED WATER QUALITY
Limits, Monitoring and Reporting Frequency

PARAMETER	STATION LOCATION	MONITORING/MEASUREMENT TYPE, NUMBER AND FREQUENCY	REPORTING CONTENT	REPORTING FREQUENCY	LIMITS
<i>Treated Water</i>					
The physical, inorganic and organic chemical and pesticide parameters listed in SCHEDULE 4, and any new parameters with MAC's published in the GCDWQ	DISTRIBUTION: RANDOM LOCATIONS	2 Grab samples per annum for all parameters with the exception of Cyanobacterial toxins (as Microcystin-LR): (a) One sample taken during winter (December to February); and (b) One sample taken during summer (June to August); and For Cyanobacterial toxins (as Microcystin-LR) two grab samples: (a) One sample taken during the period August 1 – August 16; and (b) One sample taken during the period of September 1 to September 16 in any calendar year	Analytical Results	As per the Operations Program	As per the PWR

SCHEDULE 4

Table of Physical, Inorganic chemicals, Organic chemicals and Pesticides

Substance	Specific Parameter	Substance	Specific Parameter
Physical Parameters (Primary and Secondary)	Colour; pH; Total Dissolved Solids	Organic Chemicals and Pesticides (Primary)	Atrazine + metabolites; Benzene; Benzo(a)pyrene; Bromoxynil; Carbon Tetrachloride; Chlorpyrifos; Cyanazine; Cyanobacterial toxins (as Microcystin – LR; Diazinon; Dicamba; 1,2-Dichlorobenzene; 1,4-Dichlorobenzene; 1,2-Dichlorethane; Dichloromethane; 2,4-Dichlorophenol; 2,4-D; Diclofop-methyl; Diuron; Dimethoate; Ethylbenzene; Glyphosate; Malathion; Methoxychlor; Metolachlor; Metribuzin; Monochlorobenzene; Nitrilotriacetic Acid (NTA); 2-Methyl-4- chlorophenoxyacetic acid (MCPA) Pentachlorophenol; Picloram; Simazine; Terbufos; Tetrachloroethylene; 2,3,4,6-Tetrachlorophenol; Toluene; Trichloroethylene; 2,4,6-Trichlorophenol; Trifluralin; and Vinyl Chloride.
Inorganic chemicals (Primary)	Antimony; Arsenic; Barium; Boron; Bromate; Cadmium; Chloramines; Chromium; Cyanide; Fluoride; Lead; Mercury; Nitrate; Nitrite; Selenium; and Uranium;		
Inorganic and Organic Chemicals (Secondary)	Aluminum; Ammonia; Calcium; Chloride; Copper; Total Hardness; Iron; Magnesium; Manganese; Silver; Sodium; Sulphate; Sulphide; Total Organic Carbon; Xylenes (total); and Zinc;		

**ENVIROVISTA PROGRAM FOR ENVIRONMENTAL EXCELLENCE
STEWARDSHIP AGREEMENT**

THIS AGREEMENT (the "Agreement") is made as of the 1 day of JUNE, 2011
(the "Effective Date")

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF ALBERTA
as represented by the Minister of the Environment
("Alberta Environment")

-and-

EPCOR WATER SERVICES INCORPORATED
a corporation incorporated under the laws of Alberta carrying on business at its EPCOR facilities
located in Edmonton (Edmonton Waterworks Facilities) ("EWSI")

PURPOSE:

Alberta Environment and EWSI enter into this agreement for the purpose of recognizing and promoting EWSI's voluntary environmental leadership and stewardship.

WHEREAS:

Alberta Environment administers the *Environmental Protection and Enhancement Act* ("EPEA"), and regulates activities under the EPEA.

Alberta Environment has developed a framework called the EnviroVista Program (the "Program") to promote environmental excellence and stewardship among qualified holders of approvals under the EPEA;

EWSI holds approval number 638-03-00 issued under the EPEA activity: Construction, operation and reclamation of a waterworks system;

EWSI has applied and been accepted to participate in the Champion Level of the Program with respect to its facilities located in the Rossdale and E.L. Smith Water Treatment Plants and the Edmonton Distribution System (the "Facility");

By participating in the Champion Level, EWSI has committed to achieving environmental performance measures and other commitments with respect to the Facility, as described herein;

In return for participating in the Champion Level, Alberta Environment has committed to providing certain support and recognition to EWSI, as described herein, and

Alberta Environment and the EWSI have agreed to enter into this Agreement to set forth their respective rights and obligations in the context of the Champion Level of the Program.

NOW THEREFORE in consideration of the mutual covenants and terms and conditions herein contained, Alberta Environment and EWSI agree as follows:

1. EWSI agrees to:

- (a) maintain an Environmental Management System that meets the EnviroVista Leader Level Participation Criteria 1 as described in the EnviroVista Leader's Guide, as amended;
- (b) perform and deliver the functions, duties, matters and services described in Schedule "A" to this agreement (hereinafter referred to as the "EnviroVista Commitments") to the satisfaction of Alberta Environment; and
- (c) comply with the requirements of Approval Number 638-03-00, as amended.

2. Alberta Environment agrees to:

- (a) Provide regulatory incentives listed in Schedule "B" of this Agreement;
- (b) Provide the support and recognition to EWSI listed in Schedule "C" to this Agreement; and
- (c) Provide written notice to EWSI of any amendments to the Envirovista Program requirements and the EnviroVista Leader's Guide.

DEFINITIONS

3. In this Agreement:

- (a) "Environmental Activities" means activities that impact the air, water, land and public health through the provision of treated drinking water.
- (b) "Environmental Management System" or "EMS" means a system that meets the requirements of a robust environmental management system and incorporates the ten elements for improving environmental performance and compliance as described in the Envirovista Leader's Guide (2006).
- (c) "EnviroVista Champion Level" or "Champion Level" means the second (advanced) tier of the two-tier EnviroVista Program whereby the applicant is required to commit to enhanced environmental performance through a Stewardship Agreement, (in addition to demonstrating their facility continues to meet the EnviroVista Leader Participation Criteria).
- (d) "EnviroVista Leader Participation Criteria" means criteria that applicants must meet to be eligible for acceptance into the EnviroVista Program. Facilities must have:
 - 1. An Environmental Management System in place;
 - 2. A sound record of environmental compliance at the Facility.

- (e) "EnviroVista Program" or "Program" means a voluntary facility-based program developed by Alberta Environment to recognize Alberta industrial, manufacturing and municipal operations for their environmental excellence.

TERM

- 4. The term of this Agreement shall commence on the Effective Date and terminate on the 1st day of June, 2021.

NOTICE OF DEFAULT

- 5. In the case of a finding by the Director of a default by EWSI in carrying out any of the provisions of this Agreement, the Director may give written notice thereof to EWSI and may specify the time within which to remedy the default.

TERMINATION OF CONTRACT

- 6. EWSI may terminate this Agreement, and thus its participation in the EnviroVista Champion Level of the EnviroVista Program, for any reason by notifying Alberta Environment in writing at least 180 days in advance of the termination date.
- 7. (1) Alberta Environment may terminate this Agreement at any time, with or without notice to EWSI, if EWSI:
 - (f) breaches any term, condition or provision of this Agreement unless that breach has been remedied by EWSI to the satisfaction of the Director as a result of a notice of default;
 - (g) engages in any business, enterprise or undertaking that interferes with its ability to perform under this Agreement;
 - (h) is adjudged bankrupt or makes a general assignment for the benefit of creditor or if a receiver of any type is appointed on account of EWSI's insolvency, or if in the opinion of Alberta Environment, appears to be insolvent; or
 - (i) transfers, assigns or otherwise conveys legal responsibility for the operation of the Facility to another party.
- (2) Alberta Environment may terminate this Agreement if the Government of Alberta, in its sole discretion, terminates (i) the EnviroVista Program, or (ii) the EnviroVista Champion Level of the EnviroVista Program.
- (3) In the event of termination under subclause (2) above, Alberta Environment shall notify EWSI in writing at least 180 days in advance of the termination date.
- (4) Termination of this Agreement constitutes termination of the EWSI's participation in

the Champion Level of the EnviroVista Program.

8. Upon or after termination of this Agreement, Alberta Environment and EWSI shall be discharged from and have no further obligation under this Agreement to each other.

GENERAL

9. This Agreement and the rights and obligations of the parties herein shall be governed and construed according to the laws of the Province of Alberta.
10. The EWSI Senior Vice President is the EWSI designate to act as liaison on behalf of EWSI in respect of any communication with Alberta Environment under this Agreement. The Director is Alberta Environment's designate under this Agreement.
11. All communications required or permitted to be given under this Agreement shall be in writing and may be left, properly addressed, at the office of the addressee, or sent by registered mail, postage prepaid, to the office of the addressee, in either case as follows:

(1) If to Alberta Environment, to:

111 Twin Atria Building
4999 – 98 Avenue
Edmonton, AB T6B 2X3

(2) If to EWSI, to:

Mailing Address:
EPCOR Centre
10065 Jasper Avenue
Edmonton, AB T5J 3B1

Plant Site Address:
Rossdale Water Treatment Plant
9469 Rossdale Road
Edmonton AB, Canada

or such other address as either party may from time to time designate by notice in writing to the other party. Communications may also be delivered by e-mail or by facsimile if an e-mail address or facsimile number, as applicable, is provided. Any communication which is sent by prepaid registered mail shall be deemed to have been given on the second business day after the date of mailing except in the event of an intervening postal strike or service disruption in which case notices shall not be effective until the second business day following the resumption of normal mail service. Communication by e-mail or facsimile shall not be effective unless actually received.

12. The *Freedom of Information and Protection of Privacy Act* applies to all information and records provided by EWSI to Alberta Environment and to any information and records which are in the custody or under the control of Alberta Environment.
13. Nothing in this Agreement is to be construed as creating an agency, partnership or employment relationship between EWSI and Alberta Environment.

14. There are no terms, conditions, representations or warranties made by Alberta Environment or its agents, officers or employees concerning this Agreement except those terms, conditions and representations as are expressly contained in writing in this Agreement.
15. No change, modification or alteration of this Agreement shall be valid unless it is in writing and signed by the parties hereto, and no course of dealing between the parties shall be construed to alter the terms hereof.
16. The Director may waive any obligation of EWSI under this agreement if the Director considers it appropriate to do so.
17. Alberta Environment may, from time to time, waive the performance by EWSI of any provision of this Agreement, either before or after the performance is done but a waiver (a) shall not take effect or be binding upon Alberta Environment unless it is in writing signed by Alberta Environment or under its authority, and (b) shall not limit or affect Alberta Environment's rights with respect to any other breach or non performance whether prior or subsequent thereto.
18. EWSI shall not assign this Agreement.
19. This Agreement sets forth the entire agreement between the parties hereto with respect to the EnviroVista Program and shall be deemed to have superseded any and all previous agreements and understandings, whether written or oral, between the parties respecting all rights and obligations as herein described.

IN WITNESS WHEREOF the parties have executed this Agreement on the first date written above.

HER MAJESTY THE QUEEN in right of the Province of Alberta, as represented by the Minister of Environment (by his duly authorized Representative)

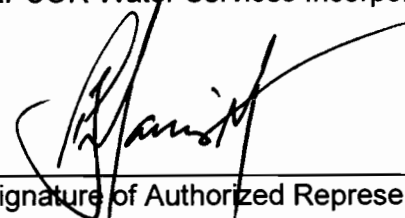
Per: 
(Signature of Authorized Representative)

Print Name: Stephen Stanley

Position Held: Sr. Vice President

EPCOR Water Services Incorporated by their duly authorized representative

Date Signed by EPCOR Water Services Incorporated: June 1, 2011

Per: 
(Signature of Authorized Representative)

Print Name: PATRICK MARRIOTT

Position Held: ACTING REGIONAL APPROVALS MANAGER

Rasel Hossain
Witness

RASEL HOSSAIN
Print Name of Witness

Schedule A – EnviroVista Champion Commitments

EWSI commits to meeting the following EnviroVista Commitments:

- (a) EWSI will maintain a robust Environmental Management System that will include an environmental policy, required and voluntary undertakings, objectives and targets, roles and responsibilities, operational control, corrective actions, training, decision making/planning, document control and continuous evaluation and improvement. EWSI will strive towards achieving and maintaining ISO14001 certification of the EMS.
- (b) EWSI will strive toward continuous improvement in its Environmental Activities and will set and regularly review environmental goals and targets. EWSI will identify and proactively address emerging issues in the water treatment industry and will work towards implementation of industry best practices.
- (c) EWSI will use a source-to-tap, multi-barrier approach to provide a consistent supply of potable public water that ensures protection of public health to both City of Edmonton and Regional customers. The treated water will meet or exceed all current Guidelines for Canadian Drinking Water Quality (GCDWQ) and other regulatory requirements. In addition:
 - i. EWSI will set and strive to meet its own internal water quality and plant treatment performance standards that exceed the minimum regulatory requirements
 - ii. EWSI will monitor for all GCDWQ guideline parameters and will also carry out additional monitoring programs for unregulated parameters (including pesticides, pharmaceuticals, and disinfection byproducts) in both source water and treated drinking water in order to better understand and mitigate both current and emerging public health risks.
 - iii. EWSI will strive to meet Performance Based Rates (PBR) requirements as listed in its agreement with the City of Edmonton (as updated), including the:
 - a) System Reliability index
 - b) Water Quality Index
 - c) Customer Service Index
 - d) Environmental Index
 - e) Safety Index
 - f) Any others as required or updated.
- (d) EWSI will develop and document, by January 1, 2013, an operations program for its drinking water treatment and distribution system and will review and update the operations program on an annual basis.
- (e) With respect to public involvement and consultation, EWSI will:
 - i. Continue with open communication with customers by means of website postings, open houses and/or mailouts;

- ii. Prepare and make public an annual EWSI performance report with respect to progress toward and achievement of EnviroVista Commitments;
 - iii. Maintain a Community Advisory Panel that consists of representatives from commercial/industrial, environmental, governmental, and residential sectors;
 - iv. Maintain a Water Quality Advisory Committee that consists of representatives from Alberta Environment and other representatives from Government of Alberta, University of Alberta, ProvLab, the City of Edmonton Emergency Response and the Regional Customer Group and other stakeholder groups as amended and required; and
 - v. Maintain working partnerships with Alberta Environment and other stakeholders and will provide advice and support on water supply, quality and treatment issues in the Edmonton region and throughout Alberta.
- (f) With respect to industry leadership, EWSI will:
- i. Maintain accreditation to ISO/ANSI 17025 in its' Quality Assurance Laboratories;
 - ii. Actively participate in the North Saskatchewan Watershed Alliance WPAC to enhance watershed and drinking water source protection, and will maintain and implement an EPCOR Source Water Protection Plan;
 - iii. Maintain distribution system pipe and appurtenance (valves, hydrants, blow-offs, etc.) replacement programs to minimize customer impacts from aging infrastructure;
 - iv. Maintain a mainbreak repair program which provides rapid response for isolation and repair of mainbreaks (with better than 90% of breaks repaired within 24 hours);
 - v. Maintain an annual unidirectional flushing and hydrant servicing program;
 - vi. Maintain a Lead Response Program to provide protection for customers from exposure to high lead concentrations at the tap arising from lead service lines;
 - vii. Maintain active membership in industry and research organizations including American Waterworks Association, the Water Research Foundation and Canadian Water and Wastewater Association and will participate in water industry research projects as contributors, lead researchers, and reviewers;
 - viii. Actively participate in Water for Life and other Alberta Environment initiatives as invited;
 - ix. Support a program of research on the potential impacts of climate change on source water quantity and quality and treated water supply;
 - x. Continue to examine the energy efficiency of its operations and will continuously evaluate capital and operational improvements to increase energy efficiency;

- xi. Partner with the City of Edmonton to support and promote a water conservation program;
- xii. Maintain active staff recruitment, training, engagement and succession planning programs; and
- xiii. Share the results of the above initiatives with Alberta Environment.

(g) With respect to reducing environmental impacts, EWSI will:

- i. Strive to reduce the impact of water treatment plant residual streams released to the North Saskatchewan River through a long-term residuals management program of continuous improvement that will include (as updated):
 - a) Reduction of water treatment plants winter solid residual production by converting to direct filtration mode of operation during winter months (Nov – Feb) while maintaining treated water quality;
 - b) Diversion of water treatment plants winter solids residuals to sanitary sewer, landfill or other solids disposal options; and
 - c) Exploration of opportunities to further reduce solids loading to the river and expanding water plants residual solids management to other seasons.
- ii. Eliminate all chlorinated discharges to surface water bodies by:
 - a) Operating treatment systems to dechlorinate all chlorinated waste streams generated at both water treatment plants; and
 - b) Implementing procedures to dechlorinate discharges of chlorinated water released from the distribution system during system flushing, reservoir draining, commissioning of new water lines and as a result of mainbreaks (after measures have been taken to isolate the break).

Schedule B – Regulatory Incentives

Based on the EnviroVista Commitments made by EWSI, the following Regulatory Incentives are provided by Alberta Environment, through Environmental Protection and Enhancement Act (EPEA) Approval Number 638-03-00:

- (a) Reduced reporting requirements;
- (b) Non-specified operational requirements, allowing management of Facility operations to be determined by EWSI, and in a manner consistent with the Facility's Environmental Management System.

Schedule C – Alberta Environment Commitments

Participants at the EnviroVista Champion Level will have access to the following incentives. Participants may select any or all of the incentives. In its application for the Champion Level, a facility may propose additional incentives for consideration by Alberta Environment.

Alberta Environment commits to provide EWSI the following, upon request of EWSI and within the ability of Alberta Environment:

1. Letters to Elected Officials and Senior Management Officials

Alberta Environment will provide letters recognizing the leadership shown by the EWSI, commending the EWSI for its stewardship commitments and explaining the exclusive nature of the Program. EWSI may request that letters be sent to the local MLA, to other Government of Alberta Ministers and senior officials, to local officials (Mayors or Reeves), to corporate managers in the company of the Facility and to others identified by EWSI (ex. other provincial Ministers, federal officials or Ministers, to financial institutions).

2. Recognition

Alberta Environment will develop a Champion Level web page on the EnviroVista site. Champion Level participants will receive a special certificate of recognition and will have use of a special logo, distinct from the Leader logo. Alberta Environment will use its web site to greater effect in recognizing Champion participants, possibly including pictures, stories and testimonials as well as links to the Facility or corporate web page. Alberta Environment in its annual conference and in its participation in other public events (ex: Special Weeks) will give special mention to Champion Level participants and their achievements. Senior Alberta Environment officials, and the Minister will publicly recognize participants in the Champion Level when speaking in public.

3. Coordinated Communications with Participating Facilities

Alberta Environment will coordinate with Champion Level participants on press releases at the time of entry in to the Program. Communications would focus on the voluntary beyond regulatory compliance nature of the Program and on the partnership approach to environmental management where Alberta Environment and EWSI share responsibility for improvement in environmental outcomes. Such coordination will also be available if EWSI withdraws subject to the Stewardship Agreement.

4. Support for Applications for Environmental and other Awards

Alberta Environment will provide written support for all participating Champion Level Facility's applications for third party environmental awards (ex: Consulting Engineers of Alberta Environmental Awards, Canadian Council of Ministers of the Environment Pollution Prevention Awards, Alberta Emerald Awards or others). Regulator support of applications for such awards can provide additional credibility and is often a requirement for a complete submission. Alberta Environment will post notices on its web page recognizing EnviroVista winners of these awards.

5. Ongoing Participation in Program Development

The Program continues to evolve. The Champion Level when established puts the basic Program framework in place; however there are many enhancements that could be pursued. Three seats on the EnviroVista Public Advisory Committee are available to Champion Level participants.

6. Policy Forums

The Minister of Alberta Environment, or a delegate, will meet annually with executives of Champion Level participants to discuss new policy direction by Alberta Environment. These forums are an opportunity for company executives to provide input on policy formation and potential regulatory changes.

7. Regulatory and Process Changes

In the longer term, Champion Level participants can use the Program as a means for identifying regulatory changes that would be incentives to continue to participate in the Program. Champion Level participants can also use the Program to recommend process changes (ex: increased use of Director discretion to allow amendments to an approval, provided the changes will have no adverse effect on the environment).

8. Priority Treatment in Applications

Alberta Environment will move Champion Level applications for amendments, renewals and approvals to the front of the applications line.